IN THE CLAIMS

1. (currently amended) A shoe including a sole having a shock absorbing capability, and a life span of the shock absorbing capability, comprising:

at least one sensor responsive to impacts experienced by the shoe, ~~and capable of producing an electric current used as a power source~~,

operational circuitry in communication with the sensor, the operational circuitry capable of representing the experienced impacts by numerical values based on a magnitude of the experienced impact and includes a logical counting mechanism to count an accumulated value by summing the numerical values and making a comparison of the accumulated value with a pre-determined lifespan value ~~manipulating data received from the sensor to estimate a remaining life of the shock absorbing capabilities of the shoe~~, and

a display apparatus in communication with the operational circuitry for displaying an approximate remaining life span based on the comparison.

2-3. (cancelled)

4. (currently amended) A shoe including a sole having a shock absorbing capability, and a life span of the shock absorbing capability, comprising:

at least one sensor responsive to impacts experienced by the shoe,

a resistor network in communication with the sensor,

a microprocessor in communication with the resistor network, the microprocessor capable of representing the experienced impacts by numerical values based on a magnitude of the experienced impact and counting an accumulated value by summing the numerical values corresponding to the experienced impacts and making a comparison of the accumulated value with a pre-determined lifespan value ~~manipulating the signal received from the sensor through the resistor network to estimate the remaining life of the shock absorbing capabilities of the shoe~~,

a power source, and

a display apparatus in communication with the microprocessor for displaying an approximate remaining life span based on the comparison.

5. (currently amended) The shoe of claim 4 wherein the sensor sends a signal through the resistor network to the microprocessor ~~operational circuitry~~, and a strength of the signal varies depending on the force of an impact experienced by the sensor.

6. (original) The shoe of claim 4 wherein the sensor comprises a piezoelectric element.

7. (original) The shoe of claim 4 wherein shoe comprises at least two sensors.

8. (original) The shoe of claim 7 wherein at least one sensor is located proximate a heel portion of the sole of the shoe, and at least one sensor is located proximate a toe portion of sole of the shoe.

9. (currently amended) The shoe of claim 6 wherein the sensor further comprises a rigid body positioned proximate the piezoelectric element to enhance the deformation of the piezoelectric element.

10. (original) The shoe of claim 4 wherein the resistor network converts the signal to a useable voltage and converts the signal to a form sensed by a digital circuitry.

11. (currently amended) The shoe of claim 10 wherein the resistor network sends signals to the microprocessor ~~operational circuitry~~ that vary depending on the strength of the signal received from the sensor.

12. (original) The shoe of claim 4 wherein the display is a visual display.

13. (original) The shoe of claim 4 wherein the display is an audible display.

14. (previously presented) A shoe including a sole having a shock absorbing capability, and a life span of the shock absorbing capability comprising:

at least one sensor responsive to impacts experienced by the shoe,

a resistor network in communication with the sensor,

a microprocessor in communication with the resistor network, the microprocessor capable of manipulating the signal received from the sensor through the resistor network to estimate a remaining life of the shock absorbing capabilities of the shoe,

a power source, and

a tactile display apparatus in communication with the microprocessor.

15. (previously presented) The shoe of claim 4 wherein the display is selected for the group consisting of light emitting diodes, electroluminescent displays, liquid crystal displays, flexible liquid crystal display, and heat activated displays.

16. (original) The shoe of claim 4 wherein the display is in alphanumeric form.

17. (original) The shoe of claim 4 wherein the display comprises one or more graphics.

18. (original) The shoe of claim 4 further comprising a button to activate the display.

19. (original) The shoe of claim 4 wherein the power source is a piezoelectric element.

20. (original) The shoe of claim 4 wherein the power source is the sensor.

21. (previously presented) The shoe of claim 14 wherein said display apparatus is an audible display that comprises a piezoelectric speaker element.

22. (currently amended) A method for estimating the approximate useful remaining life of the shock absorbing capability of the shoe, wherein the shoe comprises at least one sensor, operational circuitry in communication with the sensor, wherein the operational circuitry is capable of manipulating data received from the sensor to estimate the remaining life of the shock absorbing capabilities of the shoe, a power source electrically coupled to the operational circuitry, and a display in communication with the operational circuitry capable of displaying information related to the remaining useful life of the shock absorbing capabilities of the shoe; the method comprising the following steps:

(a) Providing a pre-determined <u>lifespan</u> numerical value,

(b) Receiving a signal from a force sensor,

(c) Applying an algorithm to the force signal to derive a value,

(d) Adding the numerical value of step (c) to a sum of such values to create a new value,

(e) Comparing the new value of step (d) to the pre-determined <u>lifespan</u> value of step (b), and

(f) Estimating the remaining life of the shock absorbing ability of the shoe based on the results of the comparison in step (e).

23. (original) The method of claim 22 further comprising the step of (g) displaying the remaining life of the shock absorbing ability of the shoe based on the results of the comparison in step (f).

24. (original) The method of claim 22 wherein steps (a) through (f) are performed separately for separate sensors.

25. (New) A shoe including a sole having a shock absorbing capability, and a life span of the shock absorbing capability, comprising:
a means for sensing impacts experienced by the shoe;
a means for communicating with the sensing means and for representing the experienced impacts by numerical values based on a magnitude of the experienced impact and including a counting means for determining an accumulated value by summing the numerical values and making a comparison of the accumulated value with a pre-determined lifespan value; and
a means for determining multi-threshold impedance values, wherein the multi-threshold impedance values are based on experimental test data associated the shock absorbing capability.

26. (New) The shoe of Claim 25, wherein the multi-threshold impedance values includes a first threshold value that is associated with a signal generated by a walking impact.

27. (New) The shoe of Claim 25, wherein the multi-threshold impedance values includes a second threshold value that is associated with a signal generated by a running impact.

28. (New) The shoe of Claim 25, wherein the multi-threshold impedance values includes a third threshold value that is associated with a signal generated by a sprinting impact.